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EDUCATION WEEK

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Georgia To Test Kindergartners For Promotion

Statewide Mandate Is Nation's First

By Deborah L. Gold

Georgia will become the first state in the nation to require all school districts to consider kindergartners' scores on a standardized test in deciding whether to promote them to the 1st grade, under a new policy set by the State Board of Education.

Pupil scores on the California Achievement Test will be only one of several factors used in reaching promotion decisions. Nevertheless, the board's action has drawn fire from leading early-childhood-education experts, who argue that testing at such an early age is inappropriate and frequently counterproductive.

Some school districts elsewhere—most notably, the Minneapolis Public Schools—have approved testing requirements for promotion to 1st grade. But prior to the Georgia board's decision, no state had

Continued on Page 15

Teacher-Training Enrollment Surging Upward, Poll Finds

By Blake Rodman

NEW ORLEANS—Preliminary data from a new national survey of teacher-training programs show a startling enrollment upswing, researchers said at a meeting here.

The findings are among the first to confirm what a number of education-school officials have been asserting for some time: that the number of students preparing for initial certification to teach is on the rise after years of decline.

The number of students at four-year colleges preparing to be teachers jumped 13.5 percent between 1985 and 1986, according to the survey of teacher-training institutions.

And although data from colleges and universities with graduate programs has yet to be fully analyzed, enrollments in their teacher-training programs—which produce the majority of the nation's new teachers—appear to have risen at a similar, if not greater, rate, according to a researcher on the survey.

Those enrollments "may be up as much as 20 percent," said Richard I. Arends, chairman of the department of curriculum and instruction at the University of Maryland at College Park. Mr. Arends is analyzing the enrollment data for the six-member research team that conducted the survey.

Between 1985 and 1986, he said, the average number of students enrolled in teacher-preparation programs at four-year colleges rose from 214 to 243.

The enrollment data and other survey findings were made public here at the annual meeting of the American Association of Colleges for Teacher Education.

Mr. Arends said a detailed analysis of enrollment trends will be presented at the meeting of the American Educational Research Association in early April.

The survey involved 1986 data gathered from 76 representative institutions over the past year by AACTE's committee on research and information. It is the second of what AACTE says will be annual surveys of its member institutions. The colleges and uni-

Continued on Page 26

NAEP Releases Delayed Report On Reading Test

But Due to 'Anomaly,' Avoids Comparisons

By Robert Rothman

The "anomaly" that produced a bafflingly steep drop in some scores on the National Assessment of Educational Progress's 1986 reading test stemmed from a technical flaw in NAEP's comparative analysis, officials said last week [illegible] port on the test.

The repor[illegible] ov more than five months while [illegible] vestigated why the results seen[illegible] a huge drop in reading perfor[illegible]ong 9- and 17-year-olds between 1984 and 1986—reflects the problem caused by the anomaly, NAEP officials acknowledged.

Rather than compare performance over time, the report examines only factors that relate to students' reading achievement on the 1986 test, which tested the reading

Continued on Page 22

Werner Rogers

Donors Seek Deeper, More Lasting Results From Gifts

Part I of this series examined the rising foundation interest in precollegiate public education. Part II reports on ambitious new foundation initiatives that seek to do much more than simply "help."

By Lynn Olson

This month, the Annie E. Casey Foundation is expected to select five cities for grants of approximately $10 million each to reduce the number of school dropouts, teenage parents, and unemployed youths.

Known as "New Futures," the $50-million program is designed to reshape the way institutions serve disadvantaged children through collaborative citywide efforts.

Although it is by far the most ambitious, the Casey Foundation's project is one of a handful of philanthropic initiatives nationwide that are intended to address the systemic problems of schools and communities.

Second of Two Parts

Instead of making specific project or categorical grants, these foundations are aiming their efforts at sweeping organizational change.

The hope is that such initiatives will lead to deeper and more lasting school reform than previous philanthropic efforts. To support that goal, foundations are committing sizable sums of money, often over long periods of time.

For example:

- The Casey Foundation's "New Futures" program is a five-year initiative. The selected cities must agree to match the foundation's grant with an equal amount—75 percent of which can be redirected from other sources, and 25 percent of which must be

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Also in the news

5 **5th Annual 'Wall Chart' Cause for Bennett Critique**
The "dead stall" in test-score improvements is proof, the Secretary says, that record spending on education has not always been wisely directed.

11 **Governance, Cost Issues Take Unusual Turns in 2 States**
In Nebraska, a call to eliminate the state board of education; in Massachusetts, a rethinking of the state's high-priced special-education system.

16 **Child Care Is Ascendant In Election-Year Politics**
In Washington last week, everyone from the President to Phyllis Schlafly was holding forth on the issue, as the governors came to town.

Cashing In on School

Money Is the New Motivator

By Ellen Flax

Every other Friday, 77 potential dropouts in Little Silver, N.J., receive a check for $50 from their high school.

To earn the money, they simply do what most of their classmates are expected to do without being paid: come to school, arrive on time, complete their homework, and behave properly.

"What we're doing," says Robert M. Nogueira, principal of Little Silver's Red Bank Regional High School, "is putting out an incentive for those kids for whom the normal incentives don't work."

The New Jersey town is not alone in concluding that money may be a stronger incentive than abstract satisfactions in the struggle against intractable school problems.

Little Silver is using funds from the federal job-training program to convince at-risk students to stay in school.

But in a growing number of other communities, corporate gifts and payments from foundation grants are providing the motivational push that once might have come from the prom-

Continued on Page 25

Students at a Louisville, Ky., school earn a "paycheck" each week that can be redeemed at a K-Mart on school grounds.

IN SUMMARY

A Setback for Fundamentalists
In a new legal setback for fundamentalist Christian parents, the U.S. Supreme Court has turned down an appeal in the closely watched Hawkins County, Tenn., reading-textbook case. **Page 7.**

A Threat to School Quality
A combination of surging enrollments and legally mandated "resource restraints" is endangering efforts to boost the quality of education in California, a new report warns. **Page 8.**

Impossible Deadline?
Many public and private schools will find it all but impossible to meet the first deadline imposed under a tough new law on hazardous asbestos, experts tracking the issue contend. **Page 9.**

Furor in Kentucky
Gov. Wallace G. Wilkinson of Kentucky has drawn fire for his proposed education budget, which critics charge would sacrifice recent reforms to pay for new initiatives. **Page 11.**

Scrutiny in Massachusetts
Top officials in Massachusetts, facing fiscal constraints resulting from Proposition 2½, are undertaking a reexamination of the state's ambitious system of special education. **Page 12.**

Update on Special Education
The number of students enrolled in special-education programs nationwide showed a small but sudden jump in 1986-87, according to statistics contained in a forthcoming federal study. **Page 17.**

Plans for Federal Research
The Education Department is proceeding with several major new research initiatives, despite what officials say is inadequate Congressional funding for such efforts. **Page 20.**

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ACROSS THE NATION

NATIONAL

Parents' Poll: Yes to AIDS Courses, No to Boycotts Over the Disease

A new national poll assessing parents' views about AIDS suggests that most would send their children to school with another child who has the disease.

The survey by Louis Harris and Associates, published this month in *Children* magazine, found that 66 percent of the parents interviewed would continue sending their child to school if a classmate was diagnosed as having AIDS. Only 21 percent favored removing their child from class in that situation.

More than half of those surveyed—56 percent—said school officials should inform the community if a student has AIDS; 39 percent favored keeping the student's name and condition confidential.

The overwhelming majority of those questioned—94 percent—said school officials should take special steps to educate teachers and students about the disease—even if no student is suspected of carrying it.

The nationwide poll of 411 parents was conducted for the magazine in October.

STATES

N.C. Officials Claim Union Is Trying To Kill Career Ladder

North Carolina education officials have charged that the National Education Association and its state affiliate are trying to gather ammunition to kill the state's career-ladder program for teachers.

But officials at the North Carolina Association of Educators, the N.E.A. affiliate, say the charges are untrue, and that the union continues to support the 2½-year-old program, which is being tested in 16 districts.

The accusations stem from statements contained in a letter to the state organization from a national union official who is helping the affiliate develop a survey to assess teachers' attitudes on the career-ladder program.

The letter states, for example, that "a good rule of thumb for reviewing [the survey] questions, is 'will I get any information that will allow the N.C.A.E. to get some evidence to modify or kill the evaluation system.'"

David Holdzkom, director of personnel relations for the state department of public instruction, said last week that he and other officials were troubled that the letter encouraged the affiliate to look for ways to attack, rather than improve, the plan.

"The underlying attitude that surfaces in this letter is that the N.E.A., and by implication the N.C.A.E., are more interested in killing and challenging the program than in working to see it improved," he said.

"We have expressed concerns, and will continue to express our concerns, about pieces of of the program," said Karen D. Garr, president of the N.C.A.E. "But we are not attempting to kill the career-ladder pilot. We support the pilot's running its full course."

She added, however, that it was too early to tell whether the union would recommend statewide adoption. "We will have to wait to see what our members want to do at the end of the pilot period," she said.

Report on Arkansas Reforms Shows Gains and 'Disappointment'

School-reform efforts in Arkansas have yielded mixed results, according to an interim report from a three-year study by the Winthrop Rockefeller Foundation.

The report, which details the second-year results of the $250,000 study, says the general perception among school officials and others involved is that reform has meant improvements in staff development and training, teacher involvement in decision-making, communication with parents, and student counseling.

But data from 75 school districts also show, it says, substantial increases in special-education placements and grade-retention rates, a decline in public support for the reforms, and "universal disappointment in the inadequacy of fiscal support" to implement them.

The study is based on a survey of 1,200 parents, school administrators, teachers, community leaders, and elected officials, conducted in the spring of 1986 and 1987. A final report will be issued at the end of this year.

The interim report may be obtained free from the Winthrop Rockefeller Foundation, 308 E. Eighth St., Little Rock, Ark., 72202.

■ **An association of small school systems in Tennessee has voted to sue the state** over the way it distributes aid.

Leaders of the Tennessee Small Counties Systems also voted last month to hire a former state finance commissioner, Lewis Donelson, to represent the group in the legal action. The suit is expected to be filed in a few months.

Wayne Qualls, superintendent of Hickman County schools and a member of the organization's board, said the purpose of the suit was to "force the state's hand" in devising a school-finance formula that is more equitable for smaller districts.

State education officials said last week that the department would issue by next fall a study of ways to revise the formula.

■ **Newly adopted admissions standards for Washington State's public universities** will require high-school students to take more academic courses, have better grades, and score higher on entrance examinations.

The admission policy, approved by the Higher Education Coordinating Board last month, will be phased in over four years. State universities currently set their own standards.

Among the new requirements are: a high-school grade-point average of at least 2.5; a score above a specified level on an entrance examination; and a high-school course load of at least four years of English, three years of mathematics and social studies, two years of science and a foreign language, and one year of an academic elective.

DISTRICTS

Career-Ladder Proposal Sparks Teachers' Strike in Cleveland

The Cleveland Public Schools were closed by a strike late last week after contract negotiations failed to resolve differences between the school board and the 5,700-member Cleveland Teachers Union.

An extra day of negotiations during a snowstorm that closed the schools on the strike deadline failed to resolve the impasses between the union and the board, which center on salaries and the board's proposal to implement a career ladder.

On the snow day, the board offered to make the career ladder voluntary, rather than mandatory, according to a board spokesman.

A C.T.U. official said the union remains concerned about the structure of the career ladder, including the number of extra hours and days that participants would be required to work, and about safeguards for teachers who opt not to participate.

Cleveland's teachers, classroom aides, and guidance staff have been working without a contract since last September.

The strike forced 72,639 students to stay home. The board of education plans to begin holding classes for graduating seniors this week at four sites, using principals and other certified administrators.

Ruling in Fort Worth Case Allows End to Mandatory Busing

A federal judge has ruled that the Fort Worth school system may dismantle the remaining components of its mandatory busing plan by next September, ending 17 years of forced busing in the district.

U.S. District Judge Eldon Mahon last month acceded to the district's request for an end to mandatory busing, saying that "the disadvantage and inconvenience posed by this limited remedial measure outweigh its benefits, if any."

The busing plan currently affects only about 1,200 pupils in the 2nd and 3rd grades, out of a districtwide enrollment of almost 67,000 students. Mandatory busing for students in other grades was discontinued in 1983.

The Fort Worth Chapter of the N.A.A.C.P. said it would appeal the decision to the U.S. Court of Appeals for the 5th Circuit. A negotiated settlement between minority plaintiffs and the school board, which would have replaced busing with remedial programs for low-achieving students, fell through shortly before a December hearing on the district's request for an end to busing.

The ruling last month does not affect other parts of the desegregation plan, which include magnet schools, majority-to-minority transfers, and a change in school-board election procedures.

■ **Officials in Anchorage are supporting plans by local Japanese business leaders to build a boarding school** that would enroll both the children of Japanese nationals working in Alaska and children from Japan.

The school would be sponsored and supported by a Japanese university.

Last month, Keio University of Tokyo announced that it would open the first Japanese high school in the United States, to be located on the campus of Manhattanville College in Purchase, N.Y.

Anchorage officials said last week that the Japanese had not yet found a sponsor or site for the high school.

They said, however, that the city may donate municipal land near one of its two

Bennett: Test Gains at 'Dead Stall'

By Reagan Walker

WASHINGTON—Secretary of Education William J. Bennett last week pronounced the state of progress in student test scores "a dead stall," and said that record spending on education has "not yet given the results our children deserve."

In what has become an annual media event—the presentation of the department's "wall chart" of educational indicators by state—Mr. Bennett took swipes at the field's bureaucratic "blob," renewed his call for a more rigorous core curriculum, and made a pitch for parental choice, autonomy and accountability for schools, and performance-based incentives for teachers.

Wall Chart on pages 18-19.

The Secretary also repeated his charge that the education-reform movement is in danger of being "hijacked" by special interests.

"Recent evidence from around the nation confirms many of my fears," he said. "We need to renew the pressure for reform."

Bruce Katz

Secretary Bennett at press conference on department's "wall chart."

Of the statistics represented in the wall chart, he said: "We're paying top dollar to educate our children, but we're sure not getting top return."

The wall chart has been criticized since its initiation in 1984 for attempting to draw comparisons between states with noncomparable data. It profiles such areas as college-entrance-examination scores, high-school graduation rates, teacher salaries, pupil-teacher ratios, and education spending.

This year's edition includes for the first time a new indicator showing the proportion of education spending that goes to pay teachers.

Speaking at a press conference that drew dozens of television cameras and more than 100 reporters, Mr. Bennett noted that "in no state do teachers' salaries make up even half of spending."

"Some of this [remaining] money is doubtless well spent," he said, "but too much of it goes to what I call 'the blob.' Spending more on education won't improve results if all we're doing is feeding educational bureaucracies."

The Secretary said, however, that he "took some comfort in the fact that' the education-reform movement is alive and responsible for important changes now taking place in many states."

"Clearly, some of the best reforms simply are not showing their dividends yet," he said.

When asked whether his admonition to "shrink the blob" of bureaucracy meant he was encouraging the defeat of local school levies, he said that would depend on the district involved.

"If I lived in certain parts of Chicago, and was asked for more money, I would say 'take a hike,' " Mr. Bennett said. "But if I lived in certain areas of Cleveland, I probably would support the investment."

Minority Gains Noted

Though national average scores on the Scholastic Aptitude Test remained unchanged in 1987, with scores on the American College Testing Program exam dropping slightly, Mr. Bennett noted that a greater proportion of students took the college-entrance exams and Advanced Placement tests than ever before.

"This means we have more potential college freshmen, and more students with advanced levels of preparation," he said. "It also means that we are succeeding in keeping scores level despite a larger pool of test-takers." He was especially encouraged, he said, by gains recorded for poor, black, and Hispanic students.

In the Advanced Placement exams, minority participation has grown by 78 percent since 1984, he noted, roughly doubling the increase among white students.

More minorities are also taking the A.C.T. and the S.A.T. exams, he said, and their scores are climbing—a fact he attributed to improved academic preparation.

"We should note that among all students, those completing a core academic curriculum averaged almost 4 points higher on the A.C.T. and 49 points higher on the S.A.T.," said the Secretary.

But in the area of graduation rates, he said, "we can and should do much better."

The national average for 1986, the latest year for which figures are available, is down slightly from the 71.7 percent recorded in 1985—to 71.5 percent. But Mr. Bennett said that "the trend line on this measure has shown improvement" from the 1982 figure of 69.5 percent.

'Sensible and Needed' Reforms

The Secretary referred to a poll of school administrators released this year that showed wide discrepancies between their attitudes toward the progress of reform efforts and those of the general public.

"This year's wall chart suggests that the education establishment has not adequately faced up to the challenge before us," he said, "a challenge seen clearly by the public."

Currently, only eight states offer programs that reward teachers and administrators based upon how well their students perform, he noted, encouraging other states to consider such incentives.

He also encourged alternative routes to teaching, citing the success of New Jersey's program.

There are now 31 states with some form of alternative certification, he said, including five that emphasize teacher internships or apprenticeships. The Secretary also urged the adoption of minimum-competency examinations for teachers. Forty-three states now require such exams for entering teachers, he said, an increase of nine since last year. Three states require current teachers to pass examinations.

"But there is still too much resistance to sensible and needed reform," he said, "to accountability measures to increased parental choice, to performance incentives, and to rewarding success and intervening where there is persistent failure."

"Public patience is wearing thin," he suggested.

Improved Chart Planned

Acknowledging criticism that using A.C.T. and S.A.T. scores is not a fair or representative way to measure student success, Mr. Bennett said the proposed expansion of the National Assessment of Educational Progress could provide a better "report card" in the future.

The department has suggested that NAEP be expanded to provide for state-by-state comparisons.

"The wall chart of the future will make this easier, by containing far more data than we have today concerning educational outcomes—by state, by grade, and by subject," Mr. Bennett said.

Other wall-chart findings:

- Average teacher salaries rose by more than $7,000 between 1982 and 1987, from $19,274 to $26,551, a gain of approximately 38 percent.
- The average teacher-pupil ratio declined steadily from 18.9 pupils per teacher in 1982 to 17.8 pupils per teacher in 1987.
- In 1986, the average per-pupil expenditure was $3,752, up $1,026 from 1982.
- In 1986, federal funds made up 6.7 percent of total school revenues; in 1982 they represented 7.4 percent.
- Twelve states require minimum-competency testing for grade-level promotions.
- Twenty-four states have planned or implemented minimum-competency testing for graduation.
- Seven states have adopted policies or passed legislation enabling the state to intervene in the management of "academically bankrupt" schools or school districts.

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DATABANK

STATE STUDENT PERFORMANCE, RESOURCE INPUTS,

STATE	STUDENT PERFORMANCE																		
	ACT[1] (28 STATES)							SAT[1] (22 STATES)							ADVANCED PLACEMENT CANDIDATES AS PERCENT OF GRADUATES		GRADUATION RATE ADJUSTED FOR MIGRATION AND UNCLASSIFIED STUDENTS[11]		PRESIDENT'S CHALLENGE: GAINS NEEDED TO MEET GOAL OF 90% BY 1998[12]
	1987 SCORE[2]	PERCENT OF HIGH SCHOOL GRADUATES TAKING TEST (EST.)[4] 1987	PERCENT OF TOTAL SCORING 26 AND ABOVE[5] 1987	1982 SCORE	PERCENT OF HIGH SCHOOL GRADUATES TAKING TEST (EST.)[6] 1982	SCORE CHANGE 1982-1987	ACT TEST SCORE IMPROVEMENT NEEDED TO MEET PRESIDENT'S 1990 CHALLENGE[7]	1987 SCORE	PERCENT OF HIGH SCHOOL GRADUATES TAKING TEST (EST.)[4] 1987	PERCENT OF TOTAL SCORING 600 OR ABOVE ON EITHER VERBAL/MATH[8] 1987	1982 SCORE	PERCENT OF HIGH SCHOOL GRADUATES TAKING TEST (EST.)[6] 1982	SCORE CHANGE 1982-1987	SAT TEST SCORE IMPROVEMENT NEEDED TO MEET PRESIDENT'S 1990 CHALLENGE[7]	1986[9]	1982[10]	1986	1982	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
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WASHINGTON																			
WEST VIRGINIA																			
WISCONSIN																			
WYOMING																			
U.S. AVERAGE																			

FOOTNOTES

1 Each State's score is shown in the column that designates either the American College Testing program (ACT) or the Scholastic Aptitude Test (SAT) as taken by most college-bound high school students in the State.

2 Ranks are explained in the following list. A "T" designates a tie.

Column 1: From highest (1) to lowest (28) ACT score
Column 2: From highest (1) to lowest (28) percentage
Column 3: From highest (1) to lowest (28) percentage
Column 4: From highest (1) to lowest (28) ACT score
Column 5: From highest (1) to lowest (28) percentage
Column 6: From largest increase (1) to largest decrease (28) in scores between 1982 and 1987
Column 7: From highest (1) to lowest (22) SAT score
Column 8: From highest (1) to lowest (22) percentage
Column 10: From highest (1) to lowest (22) percentage
Column 11: From highest (1) to lowest (22) SAT score
Column 12: From highest (1) to lowest (22) percentage
Column 13: From largest increase (1) to largest decrease (22) in scores between 1982 and 1987
Columns 15 & 16: From highest (1) to lowest (51) Advanced Placement rate
Columns 17 & 18: From highest (1) to lowest (51) graduation rate
Columns 20 & 21: From highest (1) to lowest (51) salary
Columns 22 & 23: From smallest (1) to largest (51) *ratio*
Columns 24 & 25: From smallest (1) to largest (51) *ratio*
Columns 26 & 27: From highest (1) to lowest (51) percentage
Columns 28 & 29: From highest (1) to lowest (51) expenditure
Columns 30 & 31: From highest (1) to lowest (51) percentage
Columns 32 & 33: From highest (1) to lowest (51) expenditure rate
Column 39: From highest (1) to lowest (51) income
Column 40: From highest (1) to lowest (51) rate
Column 41: From highest (1) to lowest (51) percentage
Column 42: From highest (1) to lowest (51) percentage

3 ACT scores and the percentages of graduates taking the exam may not be strictly comparable between 1987 and 1982. The 1987 scores and number of test takers represent data for students who took the ACT exam as seniors, and for those who took the test as juniors but did not take it again when they were seniors. The 1982 scores and numbers of test takers included all test takers.

4 The 1987 estimated percentage of high school graduates taking the ACT or SAT was calculated by dividing the number of 1987 ACT or SAT test takers by the number of 1986 public and 1980 private high school graduates. The number of 1987 high school graduates was not available, and not were later data on private school graduates.

5 The 1987 percentage of ACT test-takers scoring 26 and above was calculated by dividing the number of students scoring 26 and above by the total number of ACT test-takers.

6 The 1982 estimated percentage of high school graduates taking the ACT or SAT was calculated by dividing the number of 1982 ACT or SAT test takers by the number of 1982 public and 1980 private high school graduates.

7 The President's 1990 test score challenge is to regain by 1990 at least half the test score losses since the 1960s. Since the national 1972 SAT score is about halfway between national SAT scores in 1963 and 1984 when the challenge was first issued, 1972 test scores were used as the 1990 test score improvement goal.

8 The percent of SAT test-takers scoring 600 or above on the verbal and math test components was calculated as the percent of all test takers scoring 600 or above on each component. Data showing those scoring 600 or more on both test components are not available. The ranking is based on the sum of the percent of the verbal and math test takers scoring 600 or above.

9 The 1987 advanced placement candidates as a percentage of graduates was calculated by dividing the total number of 1987 advanced placement candidates by the number of 1986 public high school graduates and 1980 private school graduates. The number of 1987 public high school graduates was not available, not were later data on private school graduates.

10 The 1982 advanced placement candidates as a percentage of graduates was calculated by dividing the total number of 1982 advanced placement candidates by the number of 1982 public high school graduates and 1980 private school graduates.

11 Graduation rates are for public schools only because recent data on private high school graduates were not available by State. The adjusted graduation rate was calculated by dividing the number of public high school graduates by the public ninth grade enrollment four years earlier. Ninth grade enrollments include a prorated portion of the secondary school students who were unclassified by grade. Graduation rates were also corrected for interstate population migration. Information on the number of persons of graduating age receiving GEDs is not currently available.

12 The President's graduation rate goal is 90 percent.

13 Average annual salaries of all public school teachers.

14 The pupil-teacher ratio is the number of public elementary and secondary students divided by the number of public elementary and secondary full-time equivalent teachers. Vermont did not report any staffing data.

15 The pupil-staff ratio is the number of public elementary and secondary students divided by the number of public elementary and secondary full-time equivalent staff. The number of staff includes all professional and nonprofessional building and district level employees; it does not include personnel for contracted services. Because this information is not available for State-level education personnel in Texas, North Carolina, Nevada, Montana, Mississippi, and Connecticut underreport or do not include support staff. Vermont did not report any staffing data. The U.S. total has been adjusted for this underreporting.

16 Expenditures for classroom teachers as a percent of total current expenditures were calculated by multiplying the number of classroom teachers by average teacher salaries and dividing this figure by total current expenditures.

17 States classified as having *minimum competency testing* for grade level promotion and/or for graduation include those where either the State or local school districts have set standards. A dash indicates that the State does not have minimum competency testing for graduating classes, and/or for grade level promotion.

18 States classified under this category have policies to intervene in school districts where students are performing below specified State levels.

19 States classified as having student performance-based programs include those that have *implemented programs, funded* pilot or *local* programs, or established mechanisms for such programs as of December 1987.

20 States classified as offering alternative teacher certification have programs to attract qualified candidates into teaching by modifying traditional teacher training requirements. A dash indicates that the State does not offer alternative teacher certification. The types of certification indicated are

EDUCATION STATISTICS

STATE REFORMS, AND POPULATION CHARACTERISTICS, 1982 AND 1987

RESOURCE INPUTS													STATE REFORMS					POPULATION CHARACTERISTICS			
AVERAGE TEACHER SALARY[19]		PUPIL/TEACHER RATIO[20]		PUPIL/STAFF RATIO (TEACHERS AND OTHER EMPLOYEES)[21]		FEDERAL FUNDS AS PERCENT OF SCHOOL REVENUES		CURRENT EXPENDITURES PER PUPIL		EXPENDITURES AS PCT. OF INCOME PER CAPITA		EXPENDITURES FOR CLASSROOM TEACHERS AS A PERCENTAGE OF TOTAL CURRENT EXPENDITURES[22]		MINIMUM COMPETENCY TESTING FOR GRADE PROMOTION AND FOR GRADUATION AND PAST GRADUATING CLASS ASSESSED[17]	STATE INTERVENTION IN ACADEMICALLY DEFICIENT DISTRICTS AND YEAR IMPLEMENTED[18]	TEACHER INCENTIVES BASED ON STUDENT PERFORMANCE[19]	ALTERNATIVE TEACHER CERTIFICATION OFFERED IN STATE[20]	TEACHERS REWARDED TO TAKE CERTIFICATION EXAM, ENTERING AND CURRENT TEACHERS[21]	PER CAPITA INCOME 1986	PERCENT POVERTY AGES 5-17 1986	MINORITY PERCENT OF ENROLLMENT 1987	HANDICAPPED PERCENT OF ENROLLMENT[22] 1987
ESTIMATED 1982	1986	1982	1986	1982	1986	1982	1987	1982	1986	1982	1987	1986	1988	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)
(23)	(31)	(25)	(32)	(24)	(34)	(26)	(27)	(28)	(35)	(29)	(33)	(30)	(36)										

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EDUCATION WEEK

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Georgia, N.E.A. Settle Suit on Teacher Testing

6-Year Alabama Suit Also Reaching an End

Blake Rodman

The state of Georgia and the Georgia affiliate of the National Education Association have settled a federal lawsuit the union filed almost two years ago to bar the state from using its teacher-testing program as a screening device for certification.

Under the terms of the settlement, Georgia may continue to use its Teacher Competency Tests as a requirement for initial certification and for the recertification of practicing teachers when their credentials come up for renewal.

In exchange, the state has promised to revise all of its subject-area tests by September 1991; provide a free study course for teachers who still have to pass the tests; and pay "study grants" of $6,000 to all teachers who last fall lost their certification, and thus their jobs, because they failed to pass the examinations.

Union officials said they expect the settlement to cost the state roughly $3 million. But state officials estimated that the tab will be less than that.

In 1985, Georgia lawmakers approved legislation requiring all teachers wishing to renew their credentials after July of last year to pass the subject-area test—a requirement for all new teachers in the state since 1978.

The Georgia Association of Educators—arguing that the testing program was racially biased and not a valid predictor of job performance—filed suit in U.S. District Court to block the test requirement.

At the time of the settlement, the case

Continued on Page 17

AP/Wide World Photos

President and Mrs. Reagan, being welcomed to White House drug conference by its chairman, Lois H. Herrington. Mrs. Reagan's speech attacked recreational drug users.

'Gravest Threat' to Private Schools Is Better Public Ones, Finn Warns

By Kirsten Goldberg

NEW YORK—Using unpublished national test data to bolster his case, Assistant Secretary of Education Chester E. Finn Jr. warned independent-school leaders here that the "gravest threat" they face is a reformed public-school system.

Citing his analysis of results from two 1986 assessments of student achievement, Mr. Finn said the gap between private- and public-school performance is very slight and could be closed by reform efforts.

"You need to improve faster than the public schools if you expect to continue to have people paying an average of $6,200 a year for day schools and almost $12,000 a year for boarding schools in order to get a presumably better educational product," he said at the annual meeting of the National Association of Independent Schools.

Findings from the National Assessment of Educational Progress showed private-school students scoring at most about four points higher on the reading assessment and six points higher on history and literature tests, according to the assistant secretary.

"There's a differential," he said, "but it's a very small differential, in an area where the public-school performance is scandalously low."

Mr. Finn's use of the NAEP data drew immediate criticism from private-school leaders, who have long urged that the federally funded assessment include a larger sampling of students from private schools.

Mr. Finn, himself a graduate of the Phillips Exeter Academy, acknowledged the

Continued on Page 7

Bennett Urges Pentagon Role In War on Drugs

Says Added Funds for Education Won't Help

By Debra Viadero

WASHINGTON—The United States should enlist its armed forces in the war on drugs, Secretary of Education William J. Bennett said last week.

"As the greatest military and economic power in the world, we can do more to prevent criminals in foreign nations from growing and processing illegal drugs," Mr. Bennett argued in a speech at the White House Conference for a Drug-Free America.

If foreign countries do not cooperate in such efforts, he said, "we must consider doing this by ourselves."

"And we should consider broader use of military force against both the production and shipment of drugs," the Secretary added.

The first White House-sponsored gathering of its kind, the conference was mandated as part of the sweeping Anti-Drug Abuse Act of 1986.

Participants included the President and Nancy Reagan and members of the Cabinet, as well as more than 2,000 educators, parents, law-enforcement officers, sports figures, and others involved in what many termed a "war" like the Vietnam conflict.

Held here from Feb. 28 to March 3, the meeting followed a series of six smaller conferences in cities around the country that began last year.

A final report on the conference proceedings is due out this summer.

Secretary Bennett spoke during a panel discussion that also included Attorney General Edwin Meese 3rd, Secretary of Health and Human Services Otis R. Bowen, Secre-

Continued on Page 18

Philadelphia Agrees To Address Needs Of Asian Students

By William Snider

In a negotiated settlement that promises to end a two-year legal dispute, Philadelphia school officials have agreed to develop a plan to better meet the needs of Asian students who are not proficient in English.

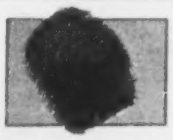
The federal lawsuit filed in December 1985 on behalf of Philadelphia's 6,800 Asian students is believed by lawyers participating in the case to be the first class action filed against a school district on behalf of Asian students since the U.S. Supreme Court decided *Lau* v. *Nichols* in 1974.

The Court in that case ruled unanimously that the San Francisco Unified School District had to take action to address the language deficiencies of non-English-speaking students of Chinese ancestry.

The agreement reached in the Philadel-

Continued on Page 18

Sex Abuse in Schools: Shocking Crime, Wide Impact



By Lisa Jennings

It was early last October, during Norward Roussell's ninth month as superintendent of the Selma (Ala.) City Schools, when he read in a local newspaper of accusations that an elementary-school principal in his jurisdiction had sexually molested schoolchildren.

The newspaper account was the first he had heard of a case that, as details unfolded, would become what Mr. Roussell describes as "a baptism by fire" on the issue of sexual abuse in the schools.

The story began with a murder: 23-year-old Robert Hall was charged with killing a teacher, Raymond Dozier, who he claimed had sexually abused him since he was a pupil in Mr. Dozier's 8th-grade class. The 23-year-old also claimed that his former school principal, Percy Marks, was involved.

After a two-month investigation, the principal was indicted on three felony counts of child sexual abuse: two counts of enticing a child to enter his house for immoral purposes and one count of sodomy.

The investigation also led to an ongoing grand-jury probe into allegations that at least 25 school workers in Alabama and Georgia counties took part in a ring of homosexual abuse and drug use that included more than 75 children.

"I was shocked at the gravity of what appeared to be involved," says Mr. Roussell.

Before the murder, he had considered child abuse an important national issue, the superintendent says, but it took the

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Also in the news

4 **In Science: Less 'Hands On' Teaching, More Bad Rankings**
Top U.S. students fare poorly in a new international comparison, but a separate study shows declining use of strong teaching methods.

10 **2 School-Finance Rulings Cloud W.Va. Tax Vote**
In the prelude to a property-tax referendum, the state's high court strikes down a budget too meager for schools and a flawed teacher-pay plan.

14 **Lobbying Group Matches 'Numbers to Rhetoric'**
During the Reagan years, the Committee for Education Funding has seen its influence grow by turning adversity into opportunity.

IN SUMMARY

Rating the 6th Grade
The 6th grade is "in limbo, and has not been sufficiently addressed," according to a new study that found three diverse approaches to the organization of this critical transition year. **Page 5.**

Update on Urban Problems
Two decades after a wave of racially charged civil disorders, the nation's cities are beset by "quiet riots" in the form of poor schools and deep social problems, an update of a landmark report says. **Page 5.**

College Leaders 'Speak Out'
The leaders of more than 200 colleges and universities, responding to a call by the president of Stanford University, have agreed to "speak out" on the need to reform teaching at all levels. **Page 8.**

A Model in Minneapolis
A new model public school emphasizing "eyeball-to-eyeball contact" between teachers and students will open in Minneapolis next fall with the help of a corporate grant. **Page 8.**

Business Backs Governor
Top business leaders in Idaho have thrown their support to the state's Democratic governor in his battle to win a major education-spending hike in the Republican-controlled legislature. **Page 10.**

Rights Bill Wins Passage
The House last week gave its approval to the "civil-rights restoration act" passed earlier by the Senate, but President Reagan promptly vowed to veto the bill when it reaches his desk. **Page 13.**

Testifying About AIDS
Witnesses ranging from Ryan White—the Indiana AIDS victim who waged a fight to attend school—to leading federal officials testified last week before the President's panel on the deadly disease. **Page 13.**

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ACROSS THE NATION

NATIONAL

Salaries of High-School Principals Average $50,000+ for First Time

The average salary of principals at the nation's high schools is $50,512 this year—above the $50,000 mark for the first time, according to the National Association of Secondary School Principals.

And at least one school system is paying a senior-high principal a record $79,400, says NASSP.

That school system enrolls between 2,500 and 9,990 students and has an average per-pupil expenditure in excess of $5,000.

The findings come from a national survey of principals' and assistant principals' compensation in more than 1,000 school systems conducted by the Educational Research Service.

Salaries for principals and their assistants were boosted by 4.1 to 8.7 percent between 1986-87 and 1987-88, the survey found.

The highest percentage increase was seen among assistant principals in school systems with enrollments ranging from 2,500 to 9,999; their pay averages $35,869, up from $32,995 last year.

Principals of junior high and middle schools are earning an average of $47,078 this year, says NASSP, while elementary principals are averaging $43,654.

For the second consecutive year, salaries are highest in the Far West and lowest in the Southeast, the survey found.

Copies of the NASSP report are available at a cost of $1 per copy from the NASSP Office of Professional Assistance, 1904 Association Drive, Reston, Va., 22091.

STATES

Two Superintendents in Alaska File Suit To Block Investigation

Two Alaska school superintendents who are under investigation by a state panel on charges that they violated its code of ethics for educators have filed a federal suit seeking to block the inquiry.

The investigating body, Alaska's Professional Teaching Practices Commission, is not capable of giving them a fair hearing, they argue, because five of its nine members belong to the state affiliate of the National Education Association, the nation's largest teachers' union.

"Constitutional due process requires a fair and impartial hearing body," said W. Richard Fossey, a lawyer for one of the superintendents. "And we don't think this is an appropriate way to constitute a state hearing body."

The superintendents, Leland Dishman of the Copper River School District and Alex Tatum of the Kashunamiut School District, also assert that the ethical standards against which they will be judged are "unconstitutionally vague," the lawyer said.

The commission has the authority to set ethical standards for educators in the state and to revoke the credentials of violators. Lawyers involved in the case declined to detail the charges brought against the superintendents.

The panel has asked the court to dismiss the case on the grounds that the 11th Amendment bars state officials from suing the state in most instances and that the suit is "premature," since the commission has not yet decided whether there is any merit to the charges.

U.S. Justice Department Probing Bakery Sales to N.C. Schools

A federal grand jury in Wilmington, N.C., has uncovered evidence that bakeries have engaged in criminal antitrust violations in connection with sales to school districts in the state, according to the U.S. Justice Department.

The American Bakeries Company of New York City was indicted earlier this year by the grand jury on one count of participating in an illegal conspiracy to rig bids on sales to schools in eastern North Carolina. The indictment alleges that American Bakeries and other companies violated the Sherman Antitrust Act during a period beginning before June 1983 and continuing at least into 1985.

The Federal Bureau of Investigation is also involved in the ongoing probe, which is examining other allegations of bid-rigging and price-fixing in school contracts for bakery goods, according to Justice Department officials.

The maximum penalty for a corporation convicted of violating the federal antitrust law is a fine of $1 million—which is about twice the profit the corporation gained from the sales—or twice the pecuniary losses caused to the purchasers, whichever is greatest.

Missouri Scraps Lifetime Certificates For Teachers Hired After Sept. 1

After more than two years of planning and debate, the Missouri Board of Education has eliminated lifetime certificates for public-school teachers in the state as part of a plan to improve the quality of the teaching force.

Except for some vocational teachers, who are not required to have college degrees, the new policy will apply to all teachers who qualify for certificates after Sept. 1 of this year. The new policy was required by a state law enacted in 1984.

"This policy marks a big change for Missouri—a change for the better," said Robert E. Bartman, state commissioner of education. "I think it will improve the status of the teaching profession in our state."

The board policy creates a four-step process that requires teachers to periodically renew their credentials and to meet certain requirements at each step.

The process leads to the award of a "continuous professional certificate" for teachers who have 10 years' experience, a master's degree, a "professional-growth plan," and a satisfactory record of performance based on evaluations.

The policy also requires that new teachers work with "mentors" and that school districts provide other assistance to encourage teachers' professional growth.

Colorado Court Upholds Privacy Of Pupils' Achievement-Test Scores

Colorado's highest court has ruled in favor of a school district seeking to protect the privacy of individual students' achievement-test scores.

The state's Open Records Act does not require the Sargent School District to provide individual scholastic records to Western Services Inc., a nonprofit Hispanic advocacy group, the state supreme court said in a Feb. 22 ruling.

The group—also known as the Chicano Education Project—had sued the district after school officials refused to turn over records showing how Hispanic students fared on the tests in comparison with their classmates.

The organization had asked the district to delete individual names from the record sheets for each class, and to substitute a letter code indicating whether a pupil was Hispanic or Anglo.

Even with the use of such codes, students' privacy would have been violated, district officials argued.

"In some classes, there were only two or three kids with Spanish surnames," said Ronald Pincheon, Sargent's superintendent of schools. "That would've made them identifiable."

■ **Only $1.5 million of a special $20-million bond issue for asbestos removal in Rhode Island schools and public buildings** has been spent or allocated since the approval of the bond issue in 1985, according to state officials.

Frederick Lippitt, director of the state's department of administration, said few districts have applied for the program, which pays half of a district's inspection, abatement, and removal costs. The agency is conducting a campaign to publicize the program, he said, and has sent letters about the available funds to all school districts in the state.

DISTRICTS

Philadelphia District, Principals Present Package of Joint Proposals

The Philadelphia Association of School Administrators and city school officials have unveiled joint recommendations that address a number of issues that have bitterly divided the district and the principals' group over the past several years.

The recommended changes include revising the district's pay scales for administrators; paying small bonuses to principals who exceed an established set of goals; creating a fund to pay for a wide range of professional-development activities; and giving principals more flexibility and support in running their schools, according to Daniel J. McGinley, president of PASA.

The agreement, worked out over the past year and presented to the city's school board last month, appears to signal a sharp turnaround in what has been a hostile relationship between the district and the administrators' group.

To gain some leverage in its dispute with the district, PASA voted in the fall of 1986 to affiliate with the International Brotherhood of Teamsters.

PASA members were to have voted on the recommendations late last week. The school board probably will not take formal action on the proposals until early this summer, a district spokesman said.

Contract With School Custodians Criticized in N.Y.C. Report

New York City's school custodians are paid more than twice the salaries of custo-

U.S. Fares Poorly on Science Test

By Robert Rothman

WASHINGTON—America's top high-school science students ranked below those of nearly all other countries in a new comparison of scores from an international test released here last week.

American 12th graders studying biology scored below students from the 16 other countries included in the analysis, which examined data from a 24-nation science assessment administered in 1986.

In chemistry, the study found, students from all other countries except Canada and Finland outscored their U.S. counterparts.

And in physics, only those two countries and Sweden ranked below the United States.

The achievement levels are particularly "discouraging," the study's authors note, since the American students in the comparison were drawn from the small proportion of the nation's high-school students enrolled in advanced science courses.

"For a technologically advanced country, it would appear that a re-examination of how science is presented and studied is required," states the report on elementary- and secondary-level science achievement, prepared by an international group of researchers.

Bassam Z. Shakhashiri, director of the science- and engineering-education directorate of the National Science Foundation, which contributed $1.25 million toward the cost of the study, echoed those conclusions.

The data "paint a dismal picture of science education in the United States today," Mr. Shakhashiri said.

"But American children have just as much native curiosity and capacity for learning about science as children in any other nation," he added.

"We must develop quickly the national will to improve the effectiveness of science education in American schools," he said.

Secretary of Education William J. Bennett said the study's findings offered an even bleaker picture of student achievement than that presented in the Education Department's latest 50-state comparison of education statistics. *(See Education Week, March 2, 1988.)*

"Last week, when we released our annual 'wall chart,' showing that American education progress is in a 'dead stall,' " he said in a statement, "many in the education establishment disagreed, and indeed some said we were doing just fine."

"Now comes this international report card," he continued, "showing that, compared with students in other countries, American elementary and high-school students are not just in a 'dead stall,' they're doing even worse."

"They're in reverse and going downhill," he charged.

Early Specialization

The study, "Science Achievement in 17 Countries: A Preliminary Report," is based on an assessment conducted by the International Association for the Evaluation of Educational Achievement.

More than 300 U.S. schools participated in the assessment, which tested 2,822 students in grade 5, 2,519 students in grade 9, and 1,729 students in grade 12.

Early findings from the test, released last year, indicated that the science achievement of U.S. students had improved little since the first such international study in 1970, and that Americans' performance lagged behind that of students from most other countries. *(See Education Week, April 29, 1987.)*

The new report notes that additional studies will be released next year that will analyze possible causes of the differences in achievement among countries.

Willard J. Jacobson, the U.S. research coordinator for the study, said a preliminary analysis indicates that the countries that performed well tended to be those—such as England, Hong Kong, and Singapore—in which students specialize in science and mathematics at an early age.

"Those with the highest scores, with the exception of Hungary, follow the English system of very intense specialization," said Mr. Jacobson, professor of natural sciences at Columbia University's Teachers College. "We are not in the same league as those early-specializing students."

"One thing the American public will have to decide is: Do we want to do a similar thing in the United States?" he said. "That ought to be considered."

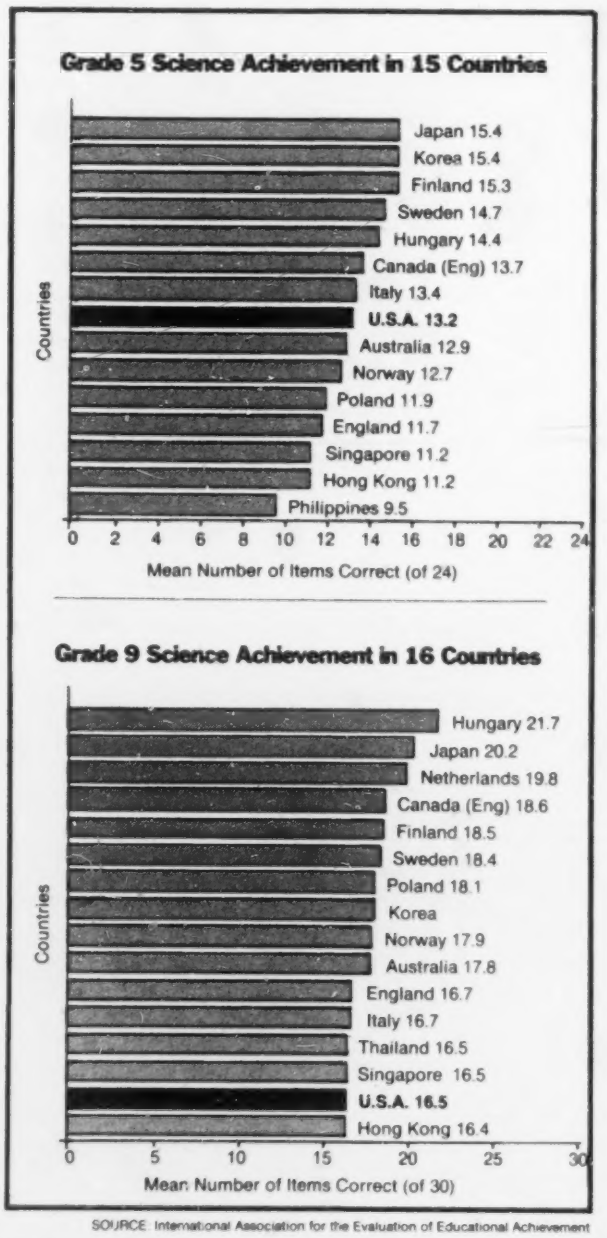
The report found that American 5th-grade students ranked 8th among the 17 nations compared, while the country's 9th graders outscored only their counterparts from Hong Kong and the Philippines.

But the average score of American 9th graders was higher than that for 5th graders, indicating an improvement over time, the authors note.

Males outperformed females in most countries and grades, the study found, although the average difference was smaller than in 1970.

However, the gender differences in the American scores were among the highest of the 17 countries, it found, and the gap grew wider at higher grade levels.

Single copies of the report can be obtained by writing the Office of Studies and Program Assessment, National Science Foundation, 1800 G Street, N.W., Washington, D.C. 20550, or by calling (202) 357-7425.



SOURCE: International Association for the Evaluation of Educational Achievement

'Hands-On' Science Instruction Declining

By Robert Rothman

The amount of science-classroom time devoted to "hands on" instruction has declined over the past decade, despite a growing consensus in the field that such instruction is more effective than traditional lectures, a federally funded survey has found.

In the 1985-86 school year, responses from teachers in the survey indicated, 83 percent of junior-high-school science classes had featured lectures in the most recent class period, while 43 percent had used hands-on activities.

But in a 1977 survey, the report says, 72 percent of such classes had featured lectures and 59 percent had included laboratory projects.

Despite that trend, the study found, 77 percent of junior-high-school science teachers in 1985-86 said they considered laboratory classes more effective than lectures.

The findings indicate that teacher training should better prepare prospective science educators in the methods practitioners deem more effective, said the survey's author, Iris R. Weiss.

"There are a lot of intervention efforts aimed at convincing teachers to use hands-on materials," said Ms. Weiss, who conducted the survey for the Research Triangle Institute in North Carolina.

"Teachers already know that they should be using hands-on materials," she said. "They are not."

Ms. Weiss now president of Horizon Research Inc., said many teachers continue to rely on lectures because classrooms are ill-equipped for laboratory work.

At the elementary-school level, the survey found, 38 percent of classrooms have no science facilities or materials, and only 6 percent of science classes are conducted in laboratories or special rooms.

In addition, Ms. Weiss said, teachers, particularly those at the elementary level, lack a background in alternative methods.

"These teachers take courses at the college level that are not hands-on oriented," she said. "The similarity between how science is taught at the college level and what we are seeing at the precollege level is striking."

Textbook Quality

The study, financed by the National Science Foundation, was based on questionnaires completed by 6,156 science and mathematics teachers, including 1,974 at the K-6 level, 1,882 in grades 7-9, and 2,300 in grades 10-12.

Many of the responses were compared with those from a similar survey Ms. Weiss conducted for the Research Triangle Institute in 1977.

Ms. Weiss presented preliminary data from the new survey a year ago at the annual meeting of the National Science Teachers Association.

At the time, she noted that fewer than a third of science teachers had taken enough science courses in college to qualify for the N.S.T.A.'s certification program.

The final report shows that, in addition to lack of preparation, teachers lack the time to develop curricula beyond what appears in textbooks.

"Across the board, teachers let the textbook define the curriculum," Ms. Weiss said.

The study found that about 90 percent of all science and math classrooms use textbooks, and that most teachers do not consider textbook quality a serious problem.

However, it notes, only one in five secondary-school classes "covers" 90 percent of the material in the text.

"Whether this finding is 'good' or 'bad' cannot be determined from the survey data," the report states. "A class that uses a wide variety of quality resources and 'covers' only a small part of the science textbook might well learn more science than one that rushes through the entire textbook."

"The survey data do point out, however," it continues, "the need for more in-depth research on the science and mathematics curriculum."

Among the other survey findings:

- The time spent on math and science instruction has remained virtually the same over the past decade. However, science instruction in grades 7-9 has shifted from general science to discipline-based teaching during that time.
- Pupils in only one in seven K-6 math classes use hand-held calculators, but their use increases by grade. Math classes—particularly at the K-6 level—are more likely than science classes to use computers.
- The proportion of science and math teachers who are members of minority groups is greater in the early grades; at the high-school level, 92 percent of science teachers and 94 percent of math teachers are white, compared with 82 percent of K-3 science teachers and 84 percent of K-3 math teachers.
- The proportion of teachers who considered the reading ability of their students a serious problem has declined since 1977.

"It is not clear whether this change is due to less-difficult textbooks, students' improved reading abilities, or other factors," the report states.

Copies of the study, "Report of the 1985-86 National Survey of Science and Mathematics Education," can be purchased for $10 each. Checks should be mailed to Linda Shaver, Research Triangle Institute, 3040 Cornwallis Rd., P.O. Box 12194, Research Triangle Park, N.C. 27709.

Percent of Classes Using Lecture, Discussion, and Hands-On Activities in Most Recent Lesson, by Subject and Grades 1977 and 1985-86

	Mathematics							
	1977				1985-86			
	K-3	4-6	7-9	10-12	K-3	4-6	7-9	10-12
Lecture	58%	68	83	89	65%	82	89	89
Discussion	88	89	83	91	81	92	90	86
Hands-on	58	38	23	24	63	31	20	12

	Science							
	1977				1985-86			
	K-3	4-6	7-9	10-12	K-3	4-6	7-9	10-12
Lecture	60%	69	72	76	71%	78	83	84
Discussion	87	90	82	77	88	86	82	80
Hands-on	67	54	59	53	57	45	43	39

SOURCE: Report of the 1985-86 National Survey of Science and Mathematics Education.